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Docket No. DAS-104XC1
Serial No. 10/754,115Amendments to the Claims:RECEIVED
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Claims 1-20 (canceled).Claim 21 (currently amended):

A method of controlling or inhibiting an insect wherein said method comprises contacting said insect with effective amounts of a Protein A, a Protein B, and a Protein C, wherein

said Protein A is approximately 230-290 kDa, said Protein A is a complex-forming protein, wherein a polynucleotide A that encodes said Protein A hybridizes/maintains—hybridization under stringent conditions with the full complement of a nucleic acid sequence A that encodes SEQ ID NO:34 (Xp1A2_{Xwi}) a *Xenorhabdus* Class A toxin-complex-insect toxin;

said Protein B is approximately 130-180 kDa, said Protein B is a complex-forming protein, wherein a polynucleotide B that encodes said Protein B hybridizes/maintains—hybridization under stringent conditions with the full complement of a nucleic acid sequence B that encodes a B amino acid sequence selected from the group consisting of SEQ ID NO:22 (TcdB1), SEQ ID NO:45 (TcdB2), SEQ ID NO:56 (TcdC), SEQ ID NO:18 (Xp1C1_{Xwi}), and SEQ ID NO:49 (Xp1B1_{Xb}) Class B toxin-complex-potentiators ;

said Protein C is approximately 90-120 kDa, said Protein C is a complex-forming protein, wherein a polynucleotide C that encodes said Protein C hybridizes/maintains hybridization under stringent conditions with the full complement of a nucleic acid sequence C that encodes a C amino acid sequence selected from the group consisting of SEQ ID NO:25 (TccC1), SEQ ID NO:47 (TccC3), SEQ ID NO:57 (TccC5), SEQ ID NO:16 (Xp1B1_{Xwi}), and SEQ ID NO:51 (Xp1C1_{Xb}) Class C toxin-complex-potentiators ;

said Protein A has activity against an insect and said activity is potentiated by said Protein B and said Protein C;

said Protein B and said Protein C potentiate the activity of said Protein A;

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wherein said B amino acid sequence is selected from the group consisting of SEQ ID NO:22 (TedB1), SEQ ID NO:45 (TedB2), and SEQ ID NO:56 (TcaC) when said C amino acid sequence is selected from the group consisting of SEQ ID NO:16 (XptB1_{xwi}) and SEQ ID NO:51 (XptC1_{xb});
wherein said C amino acid sequence is selected from the group consisting of SEQ ID NO:25 (TccC1), SEQ ID NO:47 (TccC3), and SEQ ID NO:57 (TccC5) when said B amino acid sequence is selected from the group consisting of SEQ ID NO:18 (XptC1_{xwi}) and SEQ ID NO:49 (XptB1_{xb});
~~at least one of said polynucleotide B and polynucleotide C does not maintain hybridization under stringent conditions with a nucleic acid sequence that encodes a Xenorhabdus-toxin complex potentiator; and~~
wherein said stringent conditions are 0.1X SSC and 0.1% SDS at 55° C.

Claim 22 (currently amended):

The method of claim 21 wherein said Protein A comprises nucleic acid sequence-A encodes SEQ ID NO:34 (XptA2_{xwi}).

Claim 23 (currently amended):

The method of claim 21 wherein said B amino acid sequence is nucleic acid sequence-B encodes SEQ ID NO:45 (TedB2).

Claim 24 (currently amended):

The method of claim 21 wherein said C amino acid sequence is selected from the group consisting of nucleic acid sequence-G encodes SEQ ID NO:47 (TccC3) and SEQ ID NO:57 (TccC5).

Claim 25 (currently amended):

The method of claim 21 wherein said ~~nucleic acid sequence A encodes SEQ ID NO:34 (XptA2_{xwi})~~, nucleic acid sequence B encodes SEQ ID NO:45 (TedB2), and nucleic acid sequence C encodes SEQ ID NO:47 (TccC3).

Claims 26-33 (canceled).

Claim 34 (new):

A method of inhibiting an insect wherein said method comprises contacting said insect with an A component, a B component, and a C component, wherein said components form an insecticidal toxin complex, wherein

said A component is a 230-290 kDa complex-forming protein having at least 95% identity with an A amino acid sequence selected from the group consisting of SEQ ID NO:34 (XptA2) and SEQ ID NO:14 (XptA1);

said B component is a 130-180 kDa complex-forming protein having at least 95% identity with a B amino acid sequence selected from the group consisting of SEQ ID NO:22 (TedB1), SEQ ID NO:45 (TedB2), SEQ ID NO:56 (TcaC), SEQ ID NO:18 (XptC1_{xwi}), and SEQ ID NO:49 (XptB1_{xb});

said C component is a 90-120 kDa complex-forming protein having at least 95% identity with a C amino acid sequence selected from the group consisting of SEQ ID NO:25 (TccC1), SEQ ID NO:47 (TccC3), SEQ ID NO:57 (TccC5), SEQ ID NO:16 (XptB1_{xwi}), and SEQ ID NO:51 (XptC1_{xb});

wherein said A component has activity against an insect, and wherein said B and C components potentiate said activity;

wherein said B amino acid sequence is selected from the group consisting of SEQ ID NO:22 (TedB1), SEQ ID NO:45 (TedB2), and SEQ ID NO:56 (TcaC) when said C amino acid sequence is selected from the group consisting of SEQ ID NO:16 (XptB1_{xwi}) and SEQ ID NO:51 (XptC1_{xb}); and

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wherein said C amino acid sequence is selected from the group consisting of SEQ ID NO:25 (TccC1), SEQ ID NO:47 (TccC3), and SEQ ID NO:57 (TccC5) when said B amino acid sequence is selected from the group consisting of SEQ ID NO:18 (XptC1_{Xwt}) and SEQ ID NO:49 (XptB1_{Xb}).

Claim 35 (new):

The method of claim 34 wherein said A amino acid sequence is SEQ ID NO:34 (XptA2).

Claim 36 (new):

A method of inhibiting an insect wherein said method comprises contacting said insect with an A component, a B component, and a C component, wherein said components form an insecticidal toxin complex, wherein

said A component is a 230-290 kDa complex-forming protein having at least 95% identity with an A sequence selected from the group consisting of SEQ ID NO:21 (TcdA), SEQ ID NO:62 (TcdA2), SEQ ID NO:63 (TcdA4), and SEQ ID NO:59 (TcdA);

said B component is a 130-180 kDa complex-forming protein having at least 95% identity with an amino acid sequence selected from the group consisting of SEQ ID NO:22 (TcdB1), SEQ ID NO:45 (TcdB2), SEQ ID NO:56 (TcdC), SEQ ID NO:18 (XptC1_{Xwt}), and SEQ ID NO:49 (XptB1_{Xb});

said C component is a 90-120 kDa complex-forming protein having at least 95% identity with an amino acid sequence selected from the group consisting of SEQ ID NO:25 (TccC1), SEQ ID NO:47 (TccC3), SEQ ID NO:57 (TccC5), SEQ ID NO:16 (XptB1_{Xwt}), and SEQ ID NO:51 (XptC1_{Xb});

wherein said A component has activity against an insect, and said B and C components potentiate said toxin activity;

wherein said B sequence is selected from the group consisting of SEQ ID NO:18 (XptC1_{Xwt}) and SEQ ID NO:49 (XptB1_{Xb}) when said C sequence is selected from

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the group consisting of SEQ ID NO:25 (TccC1), SEQ ID NO:47 (TccC3), and SEQ ID NO:57 (TccC5); and

wherein said C sequence is selected from the group consisting of SEQ ID NO:16 (XptB1_{Xwi}) and SEQ ID NO:51 (XptC1_{Xb}) when said B sequence is selected from the group consisting of SEQ ID NO:22 (TcdB1), SEQ ID NO:45 (TcdB2), and SEQ ID NO:56 (TcaC).

Claim 37 (new):

The method of claim 36 wherein said A sequence is SEQ ID NO:21 (TcdA).

Claim 38 (new):

The method of claim 34, wherein

- said A component comprises an amino acid sequence selected from the group consisting of SEQ ID NO:34 (XptA2) and SEQ ID NO:14 (XptA1);
- said B component comprises an amino acid sequence selected from the group consisting of SEQ ID NO:22 (TcdB1), SEQ ID NO:45 (TcdB2), SEQ ID NO:56 (TcaC), SEQ ID NO:18 (XptC1_{Xwi}), and SEQ ID NO:49 (XptB1_{Xb}); and
- said C component comprises an amino acid sequence selected from the group consisting of SEQ ID NO:25 (TccC1), SEQ ID NO:47 (TccC3), SEQ ID NO:57 (TccC5), SEQ ID NO:16 (XptB1_{Xwi}), and SEQ ID NO:51 (XptC1_{Xb});

wherein said B component comprises an amino acid sequence selected from the group consisting of SEQ ID NO:22 (TcdB1), SEQ ID NO:45 (TcdB2), and SEQ ID NO:56 (TcaC) when said C component comprises an amino acid sequence selected from the group consisting of SEQ ID NO:16 (XptB1_{Xwi}) and SEQ ID NO:51 (XptC1_{Xb}); and

wherein said C component comprises an amino acid sequence selected from the group consisting of SEQ ID NO:25 (TccC1), SEQ ID NO:47 (TccC3), and SEQ ID NO:57 (TccC5) when said B component is selected from the group consisting of SEQ ID NO:18 (XptC1_{Xwi}) and SEQ ID NO:49 (XptB1_{Xb}).

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Claim 39 (new):

The method of claim 38 wherein when said A component comprises SEQ ID NO:34 (XptA2).

Claim 40 (new):

The method of claim 35 wherein said B amino acid sequence is SEQ ID NO:45 (TedB2) and said C amino acid sequence is selected from the group consisting of SEQ ID NO:47 (TecC3) and SEQ ID NO:57 (TecC5).

Claim 41 (new):

The method of claim 40 wherein said C amino acid sequence is SEQ ID NO:47 (TecC3).

Claim 42 (new):

The method of claim 39 wherein said B component comprises SEQ ID NO:45 (TedB2), and said C component comprises SEQ ID NO:47 (TecC3).